

Appl. No.: 10/731,829  
Amdt. dated 3/2/2006  
Reply to Office action of December 2, 2005

Remarks

Applicants' undersigned representative appreciates the courtesies extended by the Examiner in discussing the final rejection as well as Applicants' response thereto which is again summarized below. For the sake of order, it is noted that following the response to the election requirement, Claims 1-3, 5, 12, 13, 17-21, 23, 30, 31, 35, 36 and 38-41 were examined with Claims 4, 6-11, 14-16, 22, 24-29, 32-334, 37, 42, 43 being withdrawn from further consideration. Claims 1-3, 12, 13, 17-21, 30, 31, 35, 36 and 39-41 are generic claims with Claims 5, 23 and 38 being drawn to the elected species of

Figure 6.

The Official Action maintains the rejection of Claims 1-3, 5, 12, 13, 17, 18, 21, 23, 30 and 31 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,554,639 to John Doriski, Jr. Further, the Official Action maintains the rejection of Claims 19, 20, 35, 36 and 38-41 under 35 U.S.C. § 103(a) as being unpatentable over the Doriski '639 patent. As described in detail below, independent Claims 1, 17 and 35, as well as the claims that depend therefrom, are patentably distinct from the cited reference and the rejections are therefore traversed. Based on the following remarks, Applicants respectfully request reconsideration to the present application and allowance of the claims.

Independent Claim 1 is directed to an integration area for providing interconnections. As recited, independent Claim 1 includes a plurality of component connection receptacles, a plurality of first conductive elements extending from each component connection receptacle and a plurality of second conductive elements. Each second conductive element extends across at least one first conductive element as shown, for example, by elements 32 and 36 in Figures 2 and 3. As also recited by independent Claim 1, the integration area includes a plurality of connections between the first and second conductive elements to provide interconnections. Notably, the plurality of connections are established at those locations at which the second conductive elements extend across the first conductive elements. As shown in the embodiment of Figure 6 and as further recited by dependent Claim 5, for example, the plurality of connections

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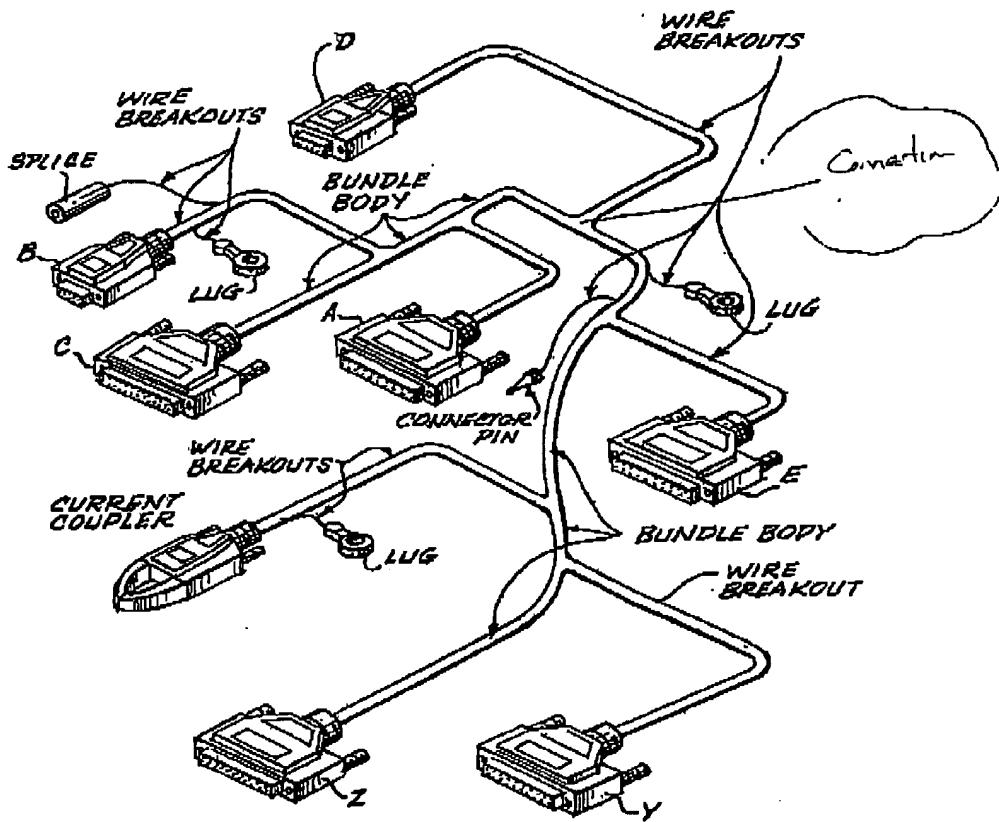
between the first and second conductive elements may include a plurality of connection vias (see, for example, element 70 in Figure 6) that extend between the first and second conductive elements and a plurality of solder patches (see, for example, element 72 in Figure 6) with each solder patch connecting at least two of the connection vias.

The Doriski '639 patent describes a wiring interface in which wire separation categories are assigned for panel connections and one or more separation dedicated connectors are assigned for each category. The separation dedicated connectors are connected via integration wire bundles.

The Official Action references Figure 3b of the Doriski '639 patent in conjunction with the extension of the second conductive elements across the first conductive elements as recited by independent Claim 1. It is initially noted that Figure 3b, as well as a number of the other figures of the Doriski '639 patent, are relatively high level wiring diagrams that do not generally necessarily depict the physical orientation of any one conductor to another conductor. Nonetheless, to the extent that the Doriski '639 patent, such as Figure 3b, depicts second conductive elements extending across first conductive elements, the Doriski '639 patent does not teach or suggest that the first and second conductive elements are interconnected "at those locations at which said second conductive elements extend across said first conductive elements," as recited by independent Claim 1.

As noted by the prior Amendment dated October 4, 2005, the only connection disclosed by the Doriski '639 patent are various splices, designated by SP1, SP2, etc. and shown in Figure 3B, for example. Moreover, the prior Amendment noted that although the splices provide connection between conductors, the conductors that are spliced are not disclosed to extend across one another as recited by the claimed invention. In response, the Official Action states "that for example the splice (SP1) do provide connection of conductors that extends across one another (see marked Figure 3A, attached)." In support of this proposition, an annotated version of Figure 3A was attached to the Official Action and is reproduced below for purposes of reference.

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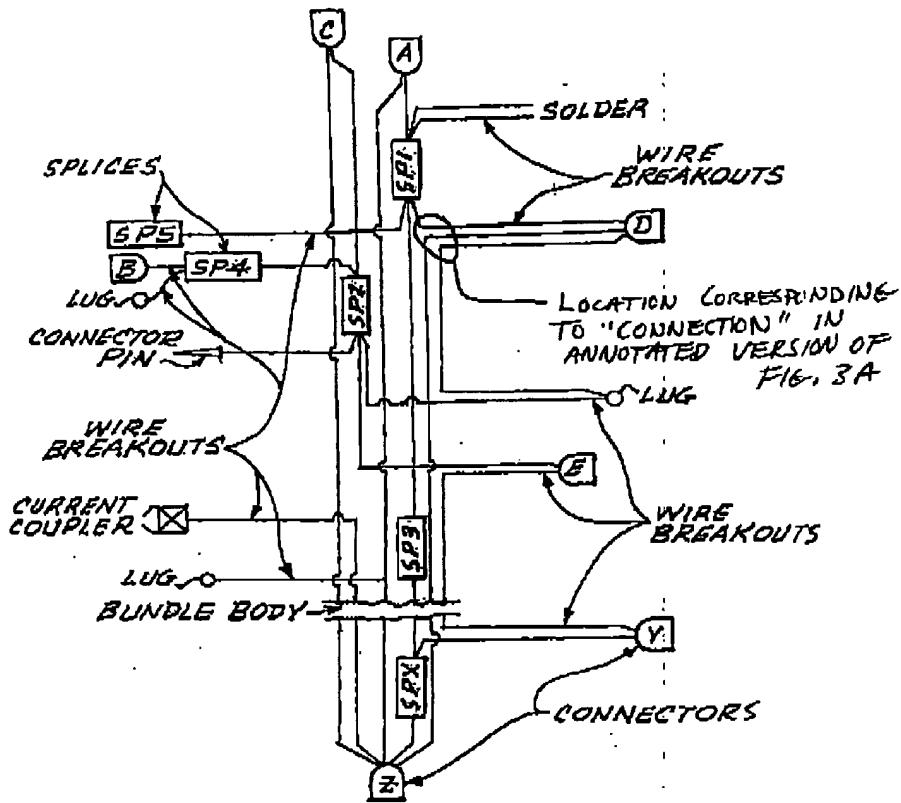
*Fig. 3A.*

With more specific reference to the language of independent Claim 1, independent Claim 1 recites that "each second conductive element extends across at least one first conductive element." Additionally, the connections between the first and second conductive elements are defined by independent Claim 1 to be "established at those conductive locations that would said second conductive elements extend across said first conductive elements." Thus, not only must the first and second conductive elements extend across one another at some point, but the interconnection itself must be established at the location at which a second conductive element extends across a respective first conductive element.

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With reference to the position taken by the Official Action and purportedly evidenced by the annotated version of Figure 3a (reproduced above), Applicants note that the point identified as a "connection" in the annotated version of Figure 3a is not, in fact, described by the Doriski '639 patent to be a connection of any type, but is, instead, merely a point at which a larger wire bundle is split into two smaller wire bundles. This splitting or redirection of the wires is not described to involve any type of connection and as shown in more detail in Figures 3b-3d, the point indicated to be a "connection" in the annotated version of Figure 3a actually only involves a redirection of the wires in different directions so as to form different smaller bundles with no connection of any sort at the point identified to be a "connection." By way of illustration, Figure 3b of the Doriski '639 patent is reproduced below with the point that corresponds to the "connection" identified in the annotated version of Figure 3a being labeled as such to evidence the lack of any type of connection with the wires, instead, being merely redirected at that point.

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*Fig. 3B.*

As to the more general comment raised by the Official Action that splices do provide connection of conductors that extend across one another, Applicants again note that independent Claim 1 does not merely require the conductors to have extended across one another at some point but, instead, that the connection itself be established at the location at which the first and second conductive elements extend across one another. In this regard, the splices appear to connect one wire to another, such as in an in-line or serial manner, and are not described to connect first and second conductive elements at locations at which the conductive elements extend across one another.

In fact, Figure 3a of the Doriski '639 patent does not teach or suggest that any of the conductors cross one another. Moreover, while Figures 3b-3d do depict conductors

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crossing one another, one of each pair of crossing conductors is shown to be arched, thereby graphically representing the arched conductor to be crossing over and not interconnected with the underlying conductor. As noted above, Figures 3b-3d are also relatively high-level wiring diagrams that do not generally necessarily depict the physical position of any one conductor to another conductor.

For each of the foregoing reasons, the Doriski '639 patent does not teach or suggest an integration area as recited by independent Claim 1 in which each second conductive element extends across at least one first conductive element and connections are established at those locations at which the second conductive elements extend across the first conductive elements. Independent Claims 17 and 35 also include comparable recitations and are therefore not taught or suggested by the Doriski '639 patent for at least the same reasons as described above in conjunction with independent Claim 1. Thus, the rejection of independent Claims 1, 17 and 35 is therefore overcome.

Since the dependent claims include the recitations of a respective independent claim, the dependent claims are therefore also patentably distinct from the Doriski '639 patent for at least the same reasons as described above in conjunction with the respective independent claims. However, a number of the dependent claims also include additional recitations that are not taught or suggested by the Doriski '639 patent and that therefore provide additional patentable distinctions. For example, dependent Claims 5, 23 and 38 define the plurality of connections between the first and second conductive elements to include a plurality of connection vias and a plurality of solder patches with each solder patch connecting at least two of the connection vias. While the Official Action points to Figures 3a, 3b and 3d of the Doriski '639 patent relative to these dependent claims, it is submitted that the Doriski '639 patent, including Figures 3a, 3b and 3d, does not define the connections between the first and second conductive elements to include a plurality of connection vias with solder patches connecting at least two of the connection vias.

Additionally, dependent Claim 39 further recites that connections are automatically made at at least one of the connection points based upon a configuration of connections that is received. The Doriski '639 patent does not teach or suggest automatically making connections as recited by dependent Claim 39. In addition, the

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Doriski '639 patent does not teach or suggest connecting first and second backplanes as recited by dependent Claims 40 and 41. In this regard, the Official Action is completely silent as to the basis of the rejection of dependent Claims 39-41 other than the general reference to these claims being obvious over the Doriski '639 patent. Thus, dependent Claims 5, 23 and 38-41 are also not taught or suggested by the Doriski '639 patent for each of these additional reasons. As described above, the rejections of the dependent claims are therefore also overcome.

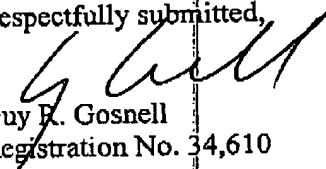
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### CONCLUSION

In view of the remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

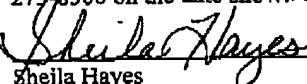
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